

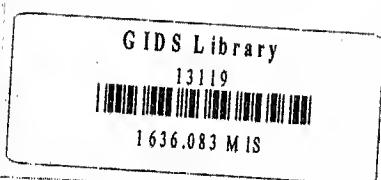
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EFFICIENT MANAGEMENT OF LIVESTOCK FARMS AND ECONOMICS OF LIVESTOCK ENTERPRISE :

A FORWARD LOOK IN THE BACKWARD STATE

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- G P Mishra *

The question of efficient livestock farm management has three major dimensions - firstly, how to manage and develop the stock of animal resources (i.e. development of livestock economy); secondly, how to harness and exploit the stock of animal resources in the social process of development; and, finally, how to grow capital for investment. All these aspects of livestock farm management, if undertaken for investigation, assume that animal husbandry has emerged as an enterprise and is separated from farming as a specialised branch of production. As a result, livestock farms operate on the principle of 'gains from trade' and the economics of livestock enterprise takes care with its principles to assess as to how 'the gains from trade' can be maximised. But the question is : whether or not livestock farming has emerged separate from farming as a specialised branch of production leading to an enterprise. In this regard, some precaution or reservation is needed because the present state of livestock economy reflects it as the blending of crop culture and caste/community-specific culture of animal husbandry and pastoralism, despite having some state-sponsored and private owned livestock farms in different parts of the country. In view of this idea, and in my opinion, the question of developing the stock of animal resources and optimising the produce from the use of a given stock in the process of sectoral development should be taken into consideration.

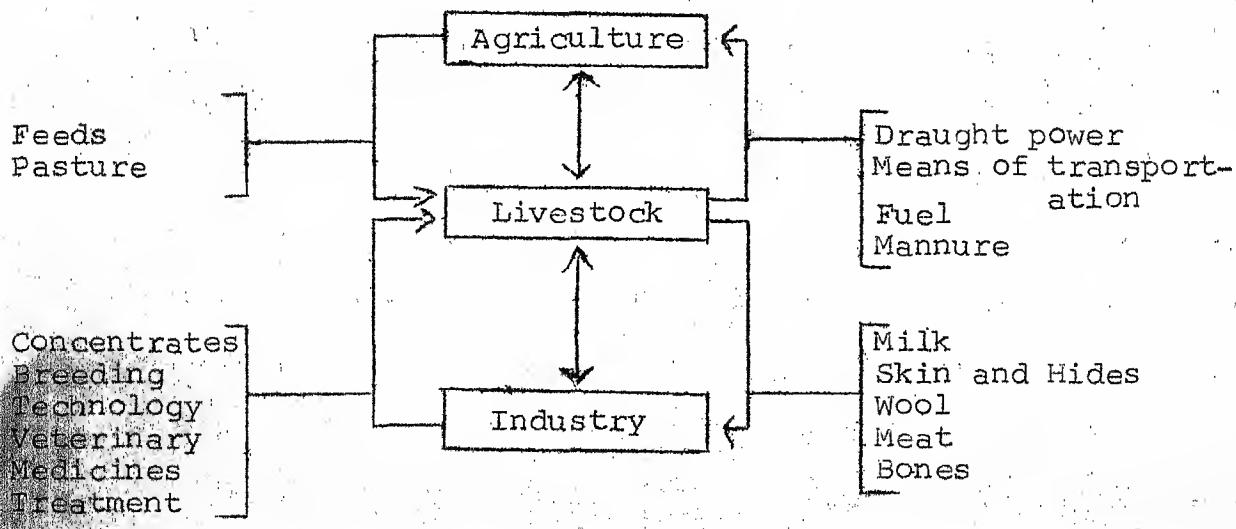
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At the above background, I propose to discuss here the characteristic pattern of relations between livestock and agriculture and industry, and the state of livestock economy in the country. These two will help us in throwing guidelines for formulating management perspective of livestock development.

Characteristic Pattern of Relations

Livestock is one of the major sources of our national wealth. A significant part of sectoral growth and employment generation depends on the livestock economy because it supplies raw materials to a number of consumer's goods industries such as leather, dairy, woollen, meat processing, etc.; provides draught power to agriculture; and products for direct human consumption. In a way, the livestock economy omits a structure of sectoral linkage in the development process of Indian economy. This is what the following chart indicates :

Chart



The above chart shows not only sectoral relations of growth with the livestock economy but also reflects how the reproduction of the livestock economy on an extended scale is interrelated with the sectoral process and structure of output growth.

State of Livestock Economy

The developmental role of livestock in the sectoral process of growth and employment creation, in the first instance, depends on the state of livestock economy and on the totality of production conditions (i.e. an overall development of productive forces and an overall level of their social intercourse in the process of production) prevailing in the economy at a given point of time.

Let us take the state of livestock economy in the country. Firstly, we have the largest bovine population in the world. But in terms of animal productivity, we are one of the most backwards on the world map of development - whether we take yield rate of milk or meat or skin and hide. Secondly, animal husbandry continues to be joint domestic economy unit, despite development of commodity-money relations in the livestock economy. Thirdly, animal husbandry is caste/community-specific activity carried out at household level, that is to say, the mode of animal domestication is caste-specific in character. Fourthly, animal husbandry is not yet free fully from the hold of traditional pastoralism which refers to a form of animal husbandry as an exclusive source of dependence for subsistence.

Fifthly, technical mode of animal domestication and production is, by and large, pre-capitalistic in rural India. Finally, commercialisation of animal resource and products is less normal but more forced. As a result, animal husbandry has partially emerged as an enterprise and many of the stock-owners have involuntary involvement in the market and they are exploited by the traders who are appropriate a large chunk of surpluses. Hence animal husbandry results in a restrictive source of capital accumulation and the level of investiveness is quite low in this sector.

Management Perspectives

For pragmatic management of livestock farming, there is a need to comprehend the state of livestock economy and the characteristic pattern of sectoral relations with this economy at both levels - inter-regional as well as intra-regional. The spatial dimension of management is required because animal rearing culture is specific to given eco-social system and that spatially varies in the country.

The present state of livestock economy and the pattern of its sectoral relations, given an eco-social system and environment, reflect that livestock farming should optimise the produce of animal resources such as draught power, milk, dung, skin and hides, meat, etc. In order to optimise produce, efforts should be made for upgrading the existing technical mode of animal husbandry or innovating new technical mode of animal farming (such as breeding) suitable to the prevailing environmental

conditions in rural areas so that it could have built-in internaliser effects there. For making such developmental efforts effective, there should be one central place in a cluster of villages with a cooperative institution to render technical and demonstration services for internalising the technical innovation in the development process of livestock farming. The state should play a catalyst role in providing appropriate infrastructures to cooperatives for making an effective use of new or upgraded technology.

In this regard, regions or areas specific to livestock farming or animal husbandry which has grown as a domestic economy unit spatially different in rural India (or far that in any state) in varied environmental conditions, should be identified and accordingly, efforts should be made by the state to use the technology through the cooperative system or institution.

Given the optimisation goal from a given stock through the application of modern science and technology, spatial variations in environmental conditions (which correspond to specific species) should be taken into consideration. While doing so, specialised animal husbandry should be promoted and all efforts should be concentrated on the farming of specific animal species.

All such management perspectives also require planning to overcome certain constraints existing on the farming of livestock which stand on the way to optimisation goal. For instance, let us take the case of pasture or grazing land and production of animal feeds. The intensive use of land with growing

population pressures in the absence of suitable alternatives to absorb surplus farm labour has led to shortage of grazing land and feeds cultivation and this shortage has resulted in surplus bovine population. The existence of surplus population costs the state and society in the absence of beef-eating consumption behaviour of a large number of people. In that case, beef-processing industry specific to space and society should be promoted for export. The state can play an important role in the promotion of beef processing industry.

Sheep or pig or chicken rearing is found to be specific to certain space and society. In fact, this is a result of the caste/community-bound division of labour, being historically specific to environmental conditions or eco-social system. Hence this aspect of pastoral culture and the specificity of a given eco-social system should be kept in mind, while going for the promotion of sheep, pig and chicken farming. The sheep and pig rearing culture is also closely associated with community grazing land which has steeply shrunk to a quite small size due to 'land hunger' resulting from lop-sided perspectives of land reform.

Briefly speaking, the optimisation goal demands for low-cost new technology and inputs specific to animal species and farming culture which correspond to the spatial specificities of given eco-social systems and conditions. All this requires clustered village approach following the principle of cooperation. Area-specific animal husbandry should be encouraged on a systematic

and scientific basis and accordingly, animal grazing land and feeds cultivating culture should be sustained. There should be marketing cooperative societies to deal with the purchase and sale of animal resources and products which are used as consumption articles directly by people and as inputs in various consumer's goods industries. Such societies are urgently required because the owners of animal resources and products are grinded under the exploitative wheels of traders and merchants.

A forward look in the backward state may not make us move ahead on the path of development as socially desired, if the present state of livestock economy and pattern of its sectoral relations is comprehended in the context of the economy as a whole.

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APPENDIX

Optimisation Goal

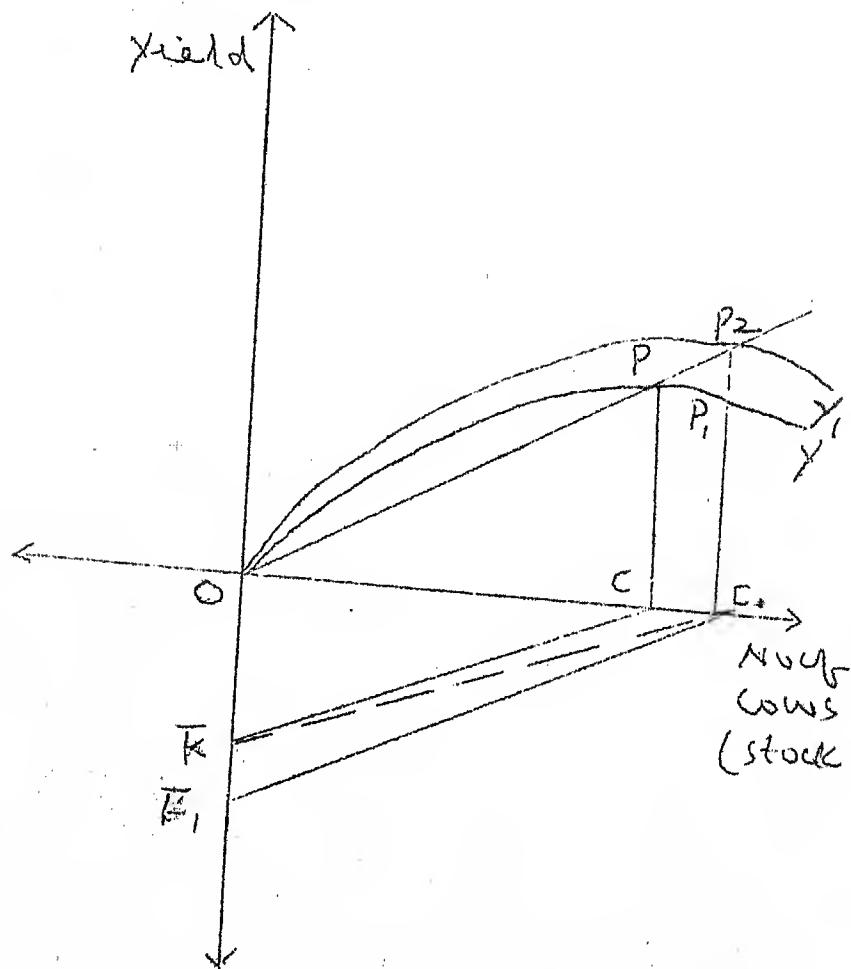
The goal of optimising yield or produce from animal husbandry/livestock farming is considered guiding principle of livestock farming management because of the following : (a) it has not emerged as a specialised branch or unit of production activity in the shape of an enterprise; (b) the technical mode of animal domestication is traditional and specific to caste-community; (c) 'land hunger' has resulted in the shortage of pastoral land for animal grazing and area under feeds cultivation; and (d) the application of modern veterinary science and technology (such as cross-breeding, farm-yard arrangements, medicines and medical treatment, etc.) is quite limited and given in the rural economy.

Given these conditions, there exists surplus bovine population in particular which is the largest in size and number. The surplus population exists because the supply of feeds is limited and an excessive number of bovine population does not add to total animal produce or yield. It is more so because there is more preference for lactose nutrients and there is no proper planning for the development of beef-processing industry for export.

The following diagram shows how surplus population exists and for what the optimisation goal stands.

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Diagram



Fixed stock of
Feeds & Capital
for maintenance

Suppose that OC_1 is the stock of cattle and OK fixed supply of feed, and capital for maintenance. The given yield curve (drawn on the assumption of given feeds and state of veterinary technology), shows that OC would be optimum stock of cattle with maximum yield at P point. In that case, CC_1 is surplus cattle which does not add to total produce but creates feeds shortage. In order to realise optimisation goal in actual life, either surplus cattle should be disposed off or the supply of feeds should be increased from OK to OK_1 . Given religious orthodoxy, extra supply of feeds and capital, i.e. KK_1 should increase. In this case, the surplus cattle, CC_1 will disappear by optimising yield at point P_2 , if the produce is taken to be a function of feeds. If so, the production curve Y shifts upward to Y_1 , indicating that the marginal productivity of cattle stock OC_1 becomes now zero at point P_2 . If the technical mode of animal husbandry changes along with increase in the supply of feeds, there will be more addition to total produce.

The above theoretical model suggests that surplus cattle can be eliminated in the process of livestock farming itself, if the supply of feeds grows and the technical mode of farming changes. Hence the optimisation goal should be taken to be main criterion for managing livestock farming in the economy like India.